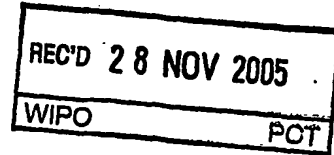


# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:  
SEMICONDUCTOR ENERGY LABORATORY  
CO., LTD.

398, Hase, Atsugi -shi, Kanagawa  
2430036 Japan

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43 bis.1)

Date of mailing (day/month/year)	22.11.2005
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Applicant's or agent's file reference  
00000PCT8113

### FOR FURTHER ACTION

See paragraph 2 below

International application No. PCT/JP2005/015114	International filing date (day/month/year) 12.08.2005	Priority date (day/month/year) 23.08.2004
--	--	--

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. **H01L21/268** (2006.01), **H01L21/20** (2006.01), **H01L21/336** (2006.01), **H01L29/786** (2006.01)

Applicant

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion		08.11.2005	
Name and mailing address of the ISA/IP	Authorized officer	4L	9835
<b>Japan Patent Office</b>	<b>SHUJI HAGIWARA</b>		
3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Telephone No. +81-3-3581-1101	Ext.	3498

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. I      Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
  
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
  
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
  
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. IV    Lack of unity of invention**

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

- ☐ complied with
- ☒ not complied with for the following reasons:

The same or corresponding matters(A) between the inventions of claims Nos. 1-37 are "producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(A) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(A) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] and [ 2, 3-13 referring to the claim 2, 15, 16-25 referring to the claim 15, 27, 28-37 referring to the claim 27] .

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☐ all parts
- ☒ the parts relating to claims Nos. 1, 3, 4, 14, 16, 26, 28

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

**1. Statement**

Novelty (N)	Claims	3, 4, 16, 28	YES
	Claims	1, 14, 26	NO
Inventive step (IS)	Claims		YES
	Claims	1, 3, 4, 14, 16, 26, 28	NO
Industrial applicability (IA)	Claims	1, 3, 4, 14, 16, 26, 28	YES
	Claims		NO

**2. Citations and explanations:**

D1:US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35

D2:US 2003/0216012 A1 (Nobuo Sasaki, et.al.,) 2003.11.20, the whole document, figs. 1-29

The subject matters of claim 1, 14, 26 do not appear to involve a novelty with respect to the cited document D1.

The cited document D1 (figs.23-26) discloses a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film.

The subject matters of claim 3, 4, 16, 28 do not appear to involve an inventive step with respect to the cited documents D1 and D2.

The cited document D2 (figs.23-26) discloses a laser irradiation apparatus with two convex cylindrical lens as the condensing lens.

On the basis of these disclosures of D1 and D2, a person skilled in the art could easily realized a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film; wherein the condensing lens is two convex cylindrical lens or a convex spherical lens.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/015114

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: IV. 3

The same or corresponding matters(B) between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] are " producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(B) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(B) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3, 4, 14, 16, 26, 28], [ 5, 6, 17, 18, 29, 30], [ 7, 8, 10, 19, 20, 31, 32], [ 9, 21, 22, 33, 34], [ 11, 23, 35], [ 12, 24, 36], [ 13, 25, 37] .

The same or corresponding matters(C) between the inventions of claims Nos. [ 2, 3-13 referring to the claim 2, 15, 16-25 referring to the claim 15, 27, 28-37 referring to the claim 27] are " forming a semiconductor film over a substrate; combining a first laser beam emitted from a first laser oscillator whose polarizing direction has been changed by a waveplate with a second laser beam emitted from a second laser oscillator by a polarizer the combined laser beam serving as a third laser beam; producing a third laser beam into a fourth laser beam by passing through a slit; producing the fourth laser beam into a fifth laser beam by using a condensing lens; irradiating the semiconductor film with the fifth laser beam; and moving the fifth laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(C) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35 and US 2003/0216012 A1 (Nobuo Sasaki, et.al.,) 2003.11.20, the whole document, figs. 1-29. Therefore, the matters(C) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 2-4, 14, 16, 26, 28], [ 5, 6, 17, 18, 29, 30], [ 7, 8, 10, 19, 20, 31, 32], [ 9, 21, 22, 33, 34], [ 11, 23, 35], [ 12, 24, 36], [ 13, 25, 37] .

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
SEMICONDUCTOR ENERGY LABORATORY  
CO., LTD.

398, Hase, Atsugi -shi, Kanagawa  
2430036 Japan

REC'D 28 NOV 2005

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PCT

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43 bis.1)

Date of mailing (day/month/year)	22.11.2005
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Applicant's or agent's file reference  
00000PCT8113

### FOR FURTHER ACTION

See paragraph 2 below

International application No. PCT/JP2005/015114	International filing date (day/month/year) 12.08.2005	Priority date (day/month/year) 23.08.2004
--	--	--

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. *H01L21/268* (2006.01), *H01L21/20* (2006.01), *H01L21/336* (2006.01), *H01L29/786* (2006.01)

Applicant

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion	08.11.2005
------------------------------------	------------

Name and mailing address of the ISA/JP

**Japan Patent Office**

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan

Authorized officer

**SHUJI HAGIWARA**

Telephone No. +81-3-3581-1101 Ext. 3498

4L	9835	
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. I**      **Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
  
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
  
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
  
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. IV    Lack of unity of invention**

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

- ☐ complied with
- ☒ not complied with for the following reasons:

The same or corresponding matters(A) between the inventions of claims Nos. 1-37 are "producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(A) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(A) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] and [ 2, 3-13 referring to the claim 2, 15, 16-25 referring to the claim 15, 27, 28-37 referring to the claim 27] .

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☐ all parts
- ☒ the parts relating to claims Nos. 1, 3, 4, 14, 16, 26, 28



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

**1. Statement**

Novelty (N)	Claims	3, 4, 16, 28	YES
	Claims	1, 14, 26	NO
Inventive step (IS)	Claims		YES
	Claims	1, 3, 4, 14, 16, 26, 28	NO
Industrial applicability (IA)	Claims	1, 3, 4, 14, 16, 26, 28	YES
	Claims		NO

**2. Citations and explanations:**

D1:US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35

D2:US 2003/0216012 A1 (Nobuo Sasaki, et.al.,) 2003.11.20, the whole document, figs. 1-29

The subject matters of claim 1, 14, 26 do not appear to involve a novelty with respect to the cited document D1.

The cited document D1 (figs.23-26) discloses a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film.

The subject matters of claim 3, 4, 16, 28 do not appear to involve an inventive step with respect to the cited documents D1 and D2.

The cited document D2 (figs.23-26) discloses a laser irradiation apparatus with two convex cylindrical lens as the condensing lens.

On the basis of these disclosures of D1 and D2, a person skilled in the art could easily realized a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film; wherein the condensing lens is two convex cylindrical lens or a convex spherical lens.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: IV. 3

The same or corresponding matters(B) between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] are " producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(B) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(B) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3, 4, 14, 16, 26, 28], [ 5, 6, 17, 18, 29, 30], [ 7, 8, 10, 19, 20, 31, 32], [ 9, 21, 22, 33, 34], [ 11, 23, 35], [ 12, 24, 36], [ 13, 25, 37].

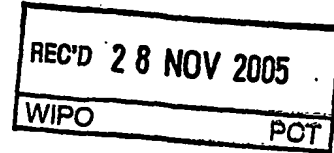
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:  
SEMICONDUCTOR ENERGY LABORATORY  
CO., LTD.

398, Hase, Atsugi -shi, Kanagawa  
2430036 Japan

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43 bis.1)

Date of mailing (day/month/year)	22.11.2005
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Applicant's or agent's file reference  
00000PCT8113

### FOR FURTHER ACTION

See paragraph 2 below

International application No. PCT/JP2005/015114	International filing date (day/month/year) 12.08.2005	Priority date (day/month/year) 23.08.2004
--	--	--

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. *H01L21/268* (2006.01), *H01L21/20* (2006.01), *H01L21/336* (2006.01), *H01L29/786* (2006.01)

Applicant

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
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- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
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2. FURTHER ACTION

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For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion		08.11.2005	
Name and mailing address of the ISA/JP  <b>Japan Patent Office</b> 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer	4L 9835
		SHUJI HAGIWARA Telephone No. +81-3-3581-1101 Ext. 3498	

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. I      Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
  
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
  
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
  
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. IV    Lack of unity of invention**

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

- ☐ complied with
- ☒ not complied with for the following reasons:

The same or corresponding matters(A) between the inventions of claims Nos. 1-37 are "producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(A) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(A) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] and [ 2, 3-13 referring to the claim 2, 15, 16-25 referring to the claim 15, 27, 28-37 referring to the claim 27] .

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☐ all parts
- ☒ the parts relating to claims Nos. 1, 3, 4, 14, 16, 26, 28

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/015114

**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

**1. Statement**

Novelty (N)	Claims	3, 4, 16, 28	YES
	Claims	1, 14, 26	NO
Inventive step (IS)	Claims		YES
	Claims	1, 3, 4, 14, 16, 26, 28	NO
Industrial applicability (IA)	Claims	1, 3, 4, 14, 16, 26, 28	YES
	Claims		NO

**2. Citations and explanations:**

D1:US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35

D2:US 2003/0216012 A1 (Nobuo Sasaki, et.al.,) 2003.11.20, the whole document, figs. 1-29

The subject matters of claim 1, 14, 26 do not appear to involve a novelty with respect to the cited document D1.

The cited document D1 (figs.23-26) discloses a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film.

The subject matters of claim 3, 4, 16, 28 do not appear to involve an inventive step with respect to the cited documents D1 and D2.

The cited document D2 (figs.23-26) discloses a laser irradiation apparatus with two convex cylindrical lens as the condensing lens.

On the basis of these disclosures of D1 and D2, a person skilled in the art could easily realized a laser irradiation method comprising: producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film; wherein the condensing lens is two convex cylindrical lens or a convex spherical lens.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/015114

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: IV. 3

The same or corresponding matters(B) between the inventions of claims Nos. [ 1, 3-13 referring to the claim 1, 14, 16-25 referring to the claim 14, 26, 28-37 referring to the claim 26] are " producing a first laser beam emitted from a laser oscillator into a second laser beam by passing through a slit; producing the second laser beam into a third laser beam by using a condensing lens; irradiating the semiconductor film with the third laser beam; and moving the third laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(B) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35. Therefore, the matters(B) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 1, 3, 4, 14, 16, 26, 28], [ 5, 6, 17, 18, 29, 30], [ 7, 8, 10, 19, 20, 31, 32], [ 9, 21, 22, 33, 34], [ 11, 23, 35], [ 12, 24, 36], [ 13, 25, 37] .

The same or corresponding matters(C) between the inventions of claims Nos. [ 2, 3-13 referring to the claim 2, 15, 16-25 referring to the claim 15, 27, 28-37 referring to the claim 27] are " forming a semiconductor film over a substrate; combining a first laser beam emitted from a first laser oscillator whose polarizing direction has been changed by a waveplate with a second laser beam emitted from a second laser oscillator by a polarizer the combined laser beam serving as a third laser beam; producing a third laser beam into a fourth laser beam by passing through a slit; producing the fourth laser beam into a fifth laser beam by using a condensing lens; irradiating the semiconductor film with the fifth laser beam; and moving the fifth laser beam relative to the semiconductor film."

However, after taking the prior art into consideration, it became apparent that the matters(C) were mentioned in a document US 2004/0041158 A1 (Mikio Hongo, et.al.,) 2004.05.04, the whole document, figs. 1-35 and US 2003/0216012 A1 (Nobuo Sasaki, et.al.,) 2003.11.20, the whole document, figs. 1-29. Therefore, the matters(C) makes no contribution over the prior art.

Consequently, there is no same or corresponding "special technical features" which is the expression in the PCT Rule 13.2. Therefore, there is no technical relationship between the inventions of claims Nos. [ 2-4, 14, 16, 26, 28], [ 5, 6, 17, 18, 29, 30], [ 7, 8, 10, 19, 20, 31, 32], [ 9, 21, 22, 33, 34], [ 11, 23, 35], [ 12, 24, 36], [ 13, 25, 37] .